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Expanded OAM Commands



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Chapter 1 Expanded OAM Commands

1.1 description

[Function]

Set port description of remote device.

[Command format]

description line *line-id* *WORD*

description client *client-id* *WORD*

no description line *line-id*

no description client *client-id*

[Parameter]

line-id: Line port ID;

client-id: Client port ID.

[Command Modes]

Remote port configuration mode, Privileged user

[Executing Command Instruction]

Use this command to set description information under remote port configuration mode. **no** format command will delete this operation.

[Explanation of command execution echo]

Remote device X does not support the command.

Remote device X extended-oam link is not established.

Remote device X set unsuccessfully.

The description is too long.

Set successfully.

[Example]

Set description for remote device user port 1 as "user A":

```
Raisecom(config-remoteport)#description client 1 userA
```

Delete description of remote device user port 1:

```
Raisecom(config-remoteport)#no description client 1
```

[Related commands]

Commands	Description
show interface port detail	Show details of remote device port.

1.2 download {bootstrap | startup-config | system-boot | fpga}

[Function]

Download file from server or center device from remote server.

[Command format]

download {*bootstrap* | *startup-config* | *system-boot* | *fpga* } *ftp* *A.B.C.D* *USERNAME* *PASSWORD* *FILENAME*

download {*bootstrap* | *startup-config* | *system-boot* | *fpga* } *tftp* *A.B.C.D* *FILENAME*

download {*bootstrap* | *system-boot* | *fpga*} *FILENAME*

download startup-config [*FILENAME*]

[Parameter]

bootstrap: system boot file;

system-boot: system startup file;

startup-config: system configuration file;

fpga: FPGA file;

tftp: download by TFTP;

ftp: download by FTP;

A.B.C.D: server IP;

USERNAME: username of FTP server;

PASSWORD: password of FTP server;

FILENAME: filename on server or center device.

[Command Modes]

Remote configuration mode, Privileged user

[Executing Command Instruction]

This command can download the file from center device or remote device server, the files will be saved in remote flash (it must be master for OAM mode). Download file to more than one remote device at the same time is available and individual device failed to download won't affect download of other devices.

The command **download** {*bootstrap* | *startup-config* | *system-boot* | *fpga*} *ftp* *A.B.C.D* *USERNAME* *PASSWORD* *FILENAME* *LOCAL-FILENAME* downloads remote file from FTP server at center device by FTP protocol and via expanded OAM protocol to send to remote device.

The command **download** {*bootstrap* | *startup-config* | *system-boot* | *fpga*} *tftp* *A.B.C.D* *FILENAME* *LOCAL-FILENAME* downloads remote file from TFTP server at center device by TFTP protocol and via expanded OAM protocol to send to remote device.

The command **download** {*bootstrap* | *system-boot* | *fpga*} *FILENAME* download file from center site to remote device via expanded OAM protocol.

The command of **download startup-config** [*FILENAME*] download file from center site to

remote device via expanded OAM protocol. The file name can also be not designated and use the default name. Default name: remote device type+ center OAM link ID+ suffix.

If remote device support files transport: FILE_ID, for example FILE_5.conf

Or else, the file name is FRAME_ID, for example FRAME_2.conf.

[Explanation of command execution echo]

Waiting...Start

Getting source file...Done

Writing to destination...Done

Success!

Failed! (Invalid IP Address)

Failed!(User name error)

Failed!(Password error)

Failed!(File name error)

Waiting...Start

Connecting to server failed

Failed!

Waiting...Start

Getting source file...

Failed!(Open file error)

Waiting...Start

Getting source file...

Failed!(Time Out error)

Waiting...Start

Getting source file...

Failed!(mem alloc error)

Waiting...Start

Getting source file...

Failed!(File to operate too large error)

Waiting...Start

Getting source file ...Done

Failed ! (OAM link X busy)

Waiting...Start

Getting source file ...Done

Failed ! (OAM link X Time out)

Waiting...Start

Getting source file ...Done

Failed ! (Remote X not support this command)

Waiting...Start

Getting source file ...Done

Failed ! (Extend OAM link X not established)

Waiting...Start

Getting source file...

Failed!(Unknown error)

[Example]

Download system-boot from server to remote device by tftp protocol:

```
Raisecom(config-remote)#download system-boot tftp 10.168.0.11 sys1.z
```

Download system-boot from server to remote device by ftp protocol:

```
Raisecom(config-remote)#download system-boot ftp 10.168.0.11 user user sys1.z
```

Download bootstrap file to remote device at center side:

```
Raisecom(config-remote)#download bootstrap bootrom2.0.boot
```

Download startup-config file to remote device at center side, use default file name:

```
Raisecom(config-remote)#download startup-config
```

[Related commands]

Commands	Description
erase	Delete specified file in flash.
dir	Show the file storage of flash.
upload	File upload.

1.3 download {remote-bootstrap | remote-system-boot | remote-startup-config | remote-fpga}

[Function]

Download the file from server to the flash of center device.

[Command format]

download {remote-bootstrap | remote-system-boot | remote-startup-config | remote-fpga } ftp
A.B.C.D USERNAME PASSWORD FILENAME LOCAL-FILENAME

download { remote-bootstrap | remote-system-boot | remote-startup-config | remote-fpga } tftp
A.B.C.D FILENAME LOCAL-FILENAME

[Parameter]

- remote-bootstrap*: system boot file of remote device;
- remote-system-boot*: system startup file of remote device;
- remote-startup-config*: system configuration file of remote device;
- remote-fpga*: FPGA file of remote device;
- tftp*: download via tftp protocol;
- ftp*: download via ftp protocol;
- A.B.C.D*: IP address of server;
- USERNAME*: user name of ftp server;
- PASSWORD*: password of ftp server;
- FILENAME*: file name of server and device;
- LOCAL-FILENAME*: file name of center device.

[Command Modes]

Privileged EXEC, Privileged user

[Executing Command Instruction]

This command can download the file (bootstrap, system-boot, startup-config and fpga file) from server to center device flash. These files will be added with suffix automatically as following:

File type	Suffix
system-boot	.Z
startup-config	.conf
bootstrap	.boot
fpga	.vme

The command can not run successfully if the file name is identical to default file name in center flash. That is to say, remote system boot file should not named as system-boot; configuration file should not named as startup-config; FPGA file should not named as fpga. Since the center device system bootstrap file is not saved in flash, the boot file of remote can named as bootstrap.

[Explanation of command execution echo]

Waiting...Start

Getting source file...Done

Writing to destination...Done

Success!

Failed! (Invalid IP Address)

Failed!(User name error)

Failed!(Password error)

Failed!(File name error)

Waiting...Start

Connecting to server failed

Failed!

Waiting...Start

Getting source file...

Failed!(Open file error)

Waiting...Start

Getting source file...

Failed!(Time Out error)

Waiting...Start

Getting source file...

Failed!(mem alloc error)

Waiting...Start

Getting source file...

Failed!(File to operate too large error)

Waiting...Start

Getting source file...

Failed!(Unknown error)

```
Waiting...Start
Getting source file ...Done
Writing file to destination ...
Failed ! (Opening file failed)
```

```
Waiting...Start
Getting source file ...Done
Writing file to destination ...
Failed ! (File writing failed)
```

[Example]

Download remote system boot file from server to center file system by tftp protocol:

```
Raisecom#download remote-system-boot tftp 10.168.0.11 sys1.z system1
```

Download remote system boot file from server to center file system by ftp protocol:

```
Raisecom#download remote-startup-config ftp 10.168.0.11 user user start.conf start2
```

[Related commands]

Commands	Description
erase	Delete specified file in flash.
dir	Show the file storage in flash.
upload	File upload.

1.4 duplex

[Function]

Use **duplex** command to set duplex mode of the client ports.

[Command format]

```
duplex { full | half }
```

[Parameter]

full: full-duplex;

half: half-duplex.

[Command Modes]

Remote port configuration mode; Privileged user

[Executing Command Instruction]

Use this command to configure remote client port duplex mode under remote port configuration mode. Different type of physical port can configure different duplex modes.

[Explanation of command execution echo]

Remote device X does not support the command.

Remote device X extended-oam link is not established.

Remote device X set unsuccessfully.

Set successfully

[Example]

Configure the remote user port to be half-duplex:

Raisecom(config-remoteport)# **duplex half**

[Related commands]

Commands	Description
speed (auto 10 100 1000)	Configure remote device speed.
show interface port	Show remote port information.
show interface port detail	Show details of remote port.

1.5 erase

[Function]

Use **erase** to delete the designated file in remote flash file system.

[Command format]

erase

[Command Modes]

Remote configuration mode and privileged user

[Executing Command Instruction]

Use **erase** to delete the designated file in remote flash file system under remote configuration mode. After reboot remote device, recover default configuration. Run this command need to input “yes” for confirmation.

[Explanation of command execution echo]

Remote device X does not support the command.

Remote device X extended-oam link is not established.

Remote device X set unsuccessfully.

Erase specified file..

Erase remote configuration file successfully

Erase specified file..

Remote device X erase configuration file unsuccessfully

[Example]

Raisecom(config-remote)#**erase**

[Related commands]

Commands	Description
Write	Save the system configuration of remote device.

1.6 fault-pass

[Function]

Enable/disable fault pass function.

[Command format]

fault-pass enable

fault-pass disable

fault-pass enable to client *client-portlist*

fault-pass disable to client *client-portlist*

[Parameter]

enable: enable fault pass;

disable: disable fault pass;

client-portlist: user port list.

[Command Modes]

Remote configuration mode, Privileged user

[Executing Command Instruction]

Use this command under remote configuration mode to enable/disable remote fault pass. For remote RC551, users can designate port transfer the fault to or cancel the ports not transfer to anymore, default to not designate port list transfer to and enable fault transfer to all ports or cancel all transfer ports. Remote RC552 is not in support of designating port transfer to.

[Explanation of command execution echo]

Remote device X does not support the command.

Remote device X extended-oam link is not established.

Remote device X set unsuccessfully.

Remote device X should not specify fault-pass port list

Set successfully

[Example]

Enable remote fault pass function, pass the fault to all user ports:

```
Raisecom(config-remote)#fault-pass enable
```

Disable pass fault to client port 1:

```
Raisecom(config-remote)#fault-pass disable to client 1
```

[Related commands]

Commands	Description
show interface port detail	Show detail information of remote port.

1.7 flowcontrol

[Function]

Enable or disable the flow control function at the remote client port.

[Command format]

```
flowcontrol on
```

```
flowcontrol off
```

[Parameter]

on: Enable flow control function;

off: Disable flow control function.

[Command Modes]

Remote configuration mode; Privileged user

[Executing Command Instruction]

Enable or disable the flow control function at the remote client port under remote port configuration mode.

[Explanation of command execution echo]

Remote device X does not support the command.

Remote device X extended-oam link is not established.

Remote device X set unsuccessfully.

Set successfully

[Example]

Disable flowcontrol of remote client port:

```
Raisecom(config-remoteport)#flowcontrol off
```

Enable remote client port:

Raisecom(config-remoteport)#**flowcontrol on**

[Related commands]

Commands	Description
show interface port	Show information of remote ports.
show interface port detail	Show details of remote ports.

1.8 hostname

[Function]

Use **hostname** command to configure system name of remote host.

Use **no hostname** command to recover default system name.

[Command format]

hostname *HOSTNAME*

no hostname

[Parameter]

HOSTNAME: new appointed system name to user.

[Default]

The default value of hostname is raisecom.

[Command Modes]

Remote configuration mode, Privileged user

[Executing Command Instruction]

This command is easy to different user to use different hostname, and different host can be marked with different hostname.

[Explanation of command execution echo]

Remote device X does not support the command.

Remote device X extended-oam link is not established.

Remote device X set unsuccessfully.

Hostname can not exceed 32 characters !

Set successfully

[Example]

Change the hostname to “A”:

Raisecom(config-remote)#**hostname A**

[Related commands]

Commands	Description
show remote-device information	Show information of remote device.

1.9 inside-loopback**[Function]**

Enable remote device optical inside loopback.

[Command format]

inside-loopback

inside-loopback *mac-exchange crc-recalculate*

no inside-loopback

[Parameter]

mac-exchange: switch MAC address;

crc-recalculate: recalculate CRC.

[Command Modes]

Remote configuration mode, Privileged user

[Executing Command Instruction]

Enable remote device optical inside loopback.

Made the response device switch MAC address and recalculate the CRC.

[Explanation of command execution echo]

Remote device X does not support the command.

Remote device X extended-oam link is not established.

Remote device X set unsuccessfully.

Set successfully

[Example]

Enable remote optical inside loopback and exchange MAC address, don't recalculate CRC:

Raisecom(config-remote)#**inside-loopback** *mac-exchange*

[Related commands]

Commands	Description
show inside-loopback	Show inside-loopback parameter and state.

1.10 interface client

[Function]

Enter physical interface configuration of client device.

[Command format]

interface client *port-id*

[Parameter]

port-id: user port ID.

[Command Modes]

Remote configuration mode, Privileged user

[Executing Command Instruction]

In Remote configuration mode, set client port configuration such as: speed, duplex, flow control, rate-limiting.

[Explanation of command execution echo]

Remote device X has no this port!

[Example]

Enter configuration mode of remote client 1 port:

Raisecom(config-remote)#**interface client 1**

1.11 ip address

[Function]

Set IP address of remote device.

[Command format]

ip address *ip-address [ip-mask] vlan-list*

no ip address *ip-address*

[Parameter]

ip-address: interface IP address, format is dotted decimal, eg: A.B.C.D;

ip-mask: interface IP mask, format is A.B.C.D;

vlan-list: VLAN ID of corresponding layer 3 interface.

[Command Modes]

Remote configuration mode and Privileged user

[Executing Command Instruction]

This command is used to configure IP address for management interface. Before the configuration of the interface IP address, the interface of concerned VLAN must be configured. The IP address of interface should be A, B or C class.

[Explanation of command execution echo]

Remote device X does not support the command.

Remote device X extended-oam link is not established.

Remote device X set unsuccessfully.

Set successfully

Can not assign ip address for vlan 2(cluster)

Can't set the same IP address on multiple remote devices

Invalid network mask

Invalid IP address or network mask

[Example]

Set remote interface IP address to 192.168.1.2, associated VLAN ID is 2:

```
Raisecom(config-remote)# ip address 192.168.1.2 255.255.255.0 1
```

Erase interface IP address:

```
Raisecom(config-remote)# no ip address 192.168.1.2
```

[Related commands]

Commands	Description
show remote-device information	Show information of remote device.
ip default-gateway A.B.C.D	Set IP default gateway for remote interface.
no ip default-gateway	

1.12 ip default-gateway**[Function]**

Use **ip default-gateway** command to set default gateway, **no ip default-gateway** to delete default gateway.

[Command format]

```
ip default-gateway A.B.C.D
```

```
no ip default-gateway
```

[Parameter]

A.B.C.D: the ip address of default gateway.

[Command Modes]

Remote configuration mode, Privileged user

[Executing Command Instruction]

When a packet do not find the router of the network, use this command can let the system transfer all the packets to the default gateway.

[Explanation of command execution echo]

Remote device X does not support the command.

Remote device X extended-oam link is not established.

Remote device X set unsuccessfully.

Set successfully

Invalid next-hop IP address.

[Example]

Set the default gateway to 10.0.0.1:

Raisecom(config-remote)# **ip default-gateway** 10.0.0.1

Delete the configuration of default gateway:

Raisecom(config-remote)# **no ip default-gateway**

[Related commands]

Commands	Description
show remote-device information	Show the information of remote device.

1.13 line-speed auto

[Function]

Enable and disable optical port speed 1000M auto-negotiation.

[Command format]

line-speed auto

no line-speed auto

[Command Modes]

Remote configuration mode, Privileged user

[Executing Command Instruction]

This command can be only used on 1G port, 100M port is unavailable.

[Explanation of command execution echo]

Remote device X does not support the command.

Remote device X extended-oam link is not established.

Remote device X set unsuccessfully.

Set successfully

[Example]

Enable optical port speed 1000M auto-negotiation:

Raisecom(config-remote)#**line-speed auto**

Disable optical port speed 1000M auto-negotiation:

Raisecom(config-remote)#**no line-speed auto**

[Related commands]

Commands	Description
show interface port	Show remote device port information.
show interface port detail	Show remote device port detail.

1.14 rate-limit

[Function]

Set bandwidth limit for remote device.

[Command format]

rate-limit line *line-id* **ingress** *rate*

rate-limit client *client-id* **ingress** *rate*

rate-limit line *line-id* **egress** *rate*

rate-limit client *client-id* **ingress** *rate*

no rate-limit line *line-id* **ingress**

no rate-limit client *client-id* **ingress**

no rate-limit line *line-id* **egress**

no rate-limit client *client-id* **egress**

[Parameter]

ingress: ingress;

egress: egress;

line-id: Line port id;

client-id: Client port id ;

rate: rate from 1 to 1048576 Kbps.

[Command Modes]

Remote configuration mode, Privileged user

[Executing Command Instruction]

Set rate limit for ingress and egress (the result may be different from academic value).

[Explanation of command execution echo]

Remote device X does not support the command.

Remote device X extended-oam link is not established.

Remote device X set unsuccessfully.

Fail to set ingress rate on remote device X!

Fail to set egress rate on remote device X!

Set successfully

[Example]

Set client port 1 ingress bandwidth at 10Mbps:

```
Raisecom(config-remote)#rate-limit client 1 ingress 10000
```

Set client port 1 egress bandwidth at 5Mbps:

```
Raisecom(config-remote)#rate-limit client 1 egress 5000
```

Delete rate limit for client port 1:

```
Raisecom(config-remote)#no rate-limit client 1 egress
```

[Related commands]

Commands	Description
show interface port detail	Show remote device details.

1.15 reboot

[Function]

Reboot remote device.

[Command format]

reboot

[Command Modes]

Remote configuration mode; privileged user

[Executing Command Instruction]

“Yes” should be entered to confirm the operation when the command is used to reboot switch.

[Explanation of command execution echo]

Remote device X does not support the command.

Remote device X extended-oam link is not established.

Remote device X set unsuccessfully.

Remote device X reboot operation is not carried out.

[Example]

Raisecom(config-remote)#**reboot**

Please input 'yes' to confirm:yes

1.16 remote-device

[Function]

Enter remote configuration mode. remote management commands is installed under this mode, and it is available to manage related remote device under this mode.

[Command format]

remote-device

[Command Modes]

Interface/Range configuration mode; privileged user

[Executing Command Instruction]

Use this command to enter remote configuration mode.

[Explanation of command execution echo]

Port X remote device extended-oam link is not established.

Line X remote device extended-oam link is not established.

[Example]

Enter remote configuration mode from the port:

Raisecom(port)#**remote-device**

[Related commands]

Commands	Description
exit	Return previous command or logout.
quit	Return previous command or logout.

1.17 show cable-diagnostics

[Function]

Show remote cable diagnostics.

[Command format]

show cable-diagnostics

[Command Modes]

Remote configuration mode, Privileged user

[Executing Command Instruction]

Check the diagnostics of remote link in remote configuration mode.

[Explanation of command execution echo]

<i>Remote device</i>	<i>Attribute</i>	<i>Status</i>	<i>Length(m)</i>
-----	-----	-----	-----
<i>1</i>	<i>Not Issued</i>	<i>N/A</i>	<i>0</i>

[Example]

Raisecom(config-remote)#**show cable-diagnostics**

[Related commands]

Commands	Description
test cable-diagnostics	Perform remote link diagnostics.

1.18 show interface port

[Function]

Show state of particular or all the ports.

[Command format]

show interface *port*

show interface *client* In support of: RC551

show interface *line* In support of: RC551

[Parameter]

port-list: port list;

client-list: client port list;

line-list: line port list.

[Command Modes]

Remote configuration mode, Privileged user

[Executing Command Instruction]

Use this command under remote configuration mode to review remote device port information:

including management state, operation state, speed and duplex and control.

[Explanation of command execution echo]

Raisecom(config-remote)#show interface port

Local Port: 12

Port	Admin	Operate	Speed/Duplex	Flowcontrol	Flowcontrol Set
line 1	enable	up(100M/full)	100M/full	off	disable
client 1	disable	down	auto	off	disable
client 2	disable	down	auto	off	disable
client 3	disable	down	auto	off	disable
client 4	enable	up(100M/full)	auto	off	disable

[Example]

Raisecom(config-remote)#show interface port

[Related commands]

Commands	Description
shutdown	Enable/disable remote client port.
duplex {full half}	Configure duplex for remote device.
speed (auto 10 100 1000)	Configure speed for remote device.
flowcontrol {on off}	Set the start and shutdown for flow control function of the port.
show interface port detail	Show details of remote port.

1.19 show interface port detail

[Function]

Show interface detail information.

[Command format]

show interface port detail

show interface client In support of: RC551

show interface line In support of: RC551

[Parameter]

port: physical port;

client-list: client port list;

line-list: line port list.

detail: detail information.

[Command Modes]

Remote configuration mode; Privileged user

[Executing Command Instruction]

Use this command under remote configuration mode to review remote port information.

[Explanation of command execution echo]

Raisecom(config-remote)#**show interface port detail**

Local port: 12, remote port:line 1

Administer: enable

Operate: up(100M/full)

Speed/Duplex set: 100M/full

Flowcontrol state: off

Flowcontrol set: disable

Ingress rate-limit: 0(No rate-limit)

Egress rate-limit: 0(No rate-limit)

Port description:

Fault pass enable: Disable

Fault pass to ports: n/a

Fault pass status: Normal

Optical module type: Unknown

SD status:Normal

Local port: 12, remote port:client 1

Administer: disable

Operate: down

Speed/Duplex set: auto

Flowcontrol state: off

Flowcontrol set: disable

Ingress rate-limit: 0(No rate-limit)

Egress rate-limit: 0(No rate-limit)

Port description:

Fault pass enable: Disable

Fault pass to ports: n/a

Fault pass status: Normal

[Example]

Raisecom(config-remote)#**show interface port detail**

[Related commands]

Commands	Description
shutdown	Shutdown or open client port.
rate-limit	Set rate limit of remote port.

fault-pass	Enable/disable fault-pass of remote optical port.
description	Set description of remote port.
duplex {full half}	Configure duplex of remote device.
speed (auto 10 100 1000)	Configure speed of remote device.
flowcontrol {on off}	Open/close flowcontrol of client port.
show interface port detail	Show details of remote port.

1.20 show interface port statistics

[Function]

Show the packet statistical information for particular or all the ports.

[Command format]

show interface port statistics

show interface client statistics In support of: RC551

show interface line statistics In support of: RC551

[Parameter]

port: physical port;

client-list: client port list;

line-list: line port list.

[Command Modes]

Remote configuration mode; privileged user

[Executing Command Instruction]

Show the packet statistical information for particular or all the ports.

[Explanation of command execution echo]

Raisecom(config-remote)#**show interface port s statistics**

Local port: 12, remote port:line 1

```

InOctets:          61,860
InPkts:            --
InUcastPkts:      0
InMulticastPkts:  780
InBroadcastPkts:  0
OutOctets:        125,334
OutPkts:          --
OutUcastPkts:     0
OutMulticastPkts: 789

```

```

OutBroadcastPkts:      809
ErrorPkts:             --
DropEvents:           0
CRCAAlignErrors:      0
UndersizePkts:        0
OversizePkts:         0
Fragments:            0
Jabbers:              0
Collisions:           0

```

Local port: 12, remote port: client 1

```

-----
InOctets:              0
InPkts:                --
InUcastPkts:          0
InMulticastPkts:      0
InBroadcastPkts:      0
OutOctets:             0
OutPkts:               --
OutUcastPkts:         0
OutMulticastPkts:     0
OutBroadcastPkts:     0
ErrorPkts:            --
DropEvents:           0
CRCAAlignErrors:      0
UndersizePkts:        0
OversizePkts:         0
Fragments:            0
Jabbers:              0
Collisions:           0

```

[Example]

Raisecom(config-remote)#**show interface port statistics**

1.21 show inside-loopback

[Function]

Show loopback state and parameter.

[Command format]

show inside-loopback**[Command Modes]**

Remote configuration mode, Privileged EXEC

[Executing Command Instruction]

Show loopback state and parameter in remote configuration mode. Remote device interface information will not be shown if remote device is unconnected or OAM link is not established.

[Explanation of command execution echo]

Raisecom(config-remote)#**show remote-device information**

Local port: 1

Loopback status: No

Loopback MAC address exchange: Yes

Loopback CRC recalculate: Yes

[Example]

Raisecom(config-remote)#**show inside-loopback**

[Related commands]

Commands	Description
inside-loopback	Enable loopback for remote device.

1.22 show oam capability

[Function]

Show OAM management capability supported by remote device.

[Command format]

show oam capability

[Command Modes]

Remote configuration mode, Privileged user

[Executing Command Instruction]

Show OAM management capability supported by remote device in remote configuration mode. OAM has 9 kinds of capability: OAM file transmission, IP address and gateway configuration, SNMP community configuration, port configuration, environment monitor, remote device reset, remote device configuration saving and erasing and host name configuration.

[Explanation of command execution echo]

Raisecom(config-remote)#**show oam capability**

Local port: 12

OID parse capability [Support]

File transmission via OAM [Support]

IP address and default-gateway configuration [Support]

<i>SNMP community configuration</i>	<i>[Support]</i>
<i>Port configuration</i>	<i>[Support]</i>
<i>Device environment monitor</i>	<i>[Support]</i>
<i>Device reboot</i>	<i>[Support]</i>
<i>Save remote device current configuration to flash file</i>	<i>[Support]</i>
<i>Device configuration file erasion</i>	<i>[Support]</i>
<i>Device hostname configuration</i>	<i>[Support]</i>
<i>OAM notification enable configuration</i>	<i>[Support]</i>
<i>SFP</i>	<i>[Support]</i>
<i>Q-in-Q</i>	<i>[Support]</i>
<i>Cable-diagnostics</i>	<i>[Support]</i>

[Example]

```
Raisecom(config-remote)#show oam capability
```

1.23 show remote-device information**[Function]**

Show basic information for remote device.

[Command format]

show remote-device information

[Command Modes]

Remote configuration mode, Privileged EXEC

[Executing Command Instruction]

This command can show remote device information in remote configuration mode, including port ID, device name, product name, host name, version for hardware and software, port number, FPGA chip ID and software number, IP subnet configuration, SNMP community configuration, device temperature and voltage.

[Explanation of command execution echo]

```
Raisecom(config-remote)#show remote-device information
```

Local Port: 12

Product Name: RC551-4FE

Hostname: Raisecom

Operation Software Version: 3.1.680.RC551-4FE.28.20061002

Hardware Version: Rev.A

Total ports: 5

IP Address:10.0.5.128,IP address Mask:255.0.0.0

Management Vlan: 1

Port:line 1,client 1-client 4

Untag port:line 1,client 1-client 4

IP Default-gateway:n/a

Community Name:n/a, Access:n/a

OAM Notification:Enable

Device current temperature:34 (Celsius)

<i>Ref. Volt(mv)</i>	<i>Current Volt(mv)</i>
<i>3300</i>	<i>3317</i>
<i>2500</i>	<i>2513</i>
<i>1800</i>	<i>1758</i>
<i>1200</i>	<i>1252</i>

[Example]

Raisecom(config-remote)#**show remote-device information**

1.24 show sfp

[Function]

Show remote SFP module information.

[Command format]

show sfp

[Command Modes]

Remote configuration mode, Privileged user

[Executing Command Instruction]

Show remote SFP module information in remote configuration mode.

[Explanation of command execution echo]

Local port:1

Port:1

Exist: Yes

Module type: SFP

Optical interface: LC

Media type: 9/125 fiber

RX LOS: normal

TX fault: normal

TX enable: Enable

Speed: 125M

Transport distance: 12345km

Wave length: 1477nm

Vendor: WTD

Product type: RTX191DA

Version: 0001

Serial number: B009822

[Example]

Raisecom(config-remote)#**show sfp**

1.25 show snmp trap remote

[Function]

Show remote trap enable configuration.

[Command format]

show snmp trap remote

[Command Modes]

Remote configuration mode, Privileged user

[Executing Command Instruction]

This command can show remote trap enable configuration.

[Explanation of command execution echo]

Raisecom#**show snmp trap remote**

SNMP Remote Trap: Enable

[Example]

Raisecom(config)# **show snmp trap remote**

[Related commands]

Commands	Description
snmp trap remote {enable disable}	Enable/disable remote trap switch.

1.26 shutdown

[Function]

Shutdown the client port, use **no** command to open the port.

[Command format]

shutdown

no shutdown

[Command Modes]

Remote port configuration mode; privileged user

[Executing Command Instruction]

Use this command under remote port configuration mode to shutdown and open client port.

[Explanation of command execution echo]

Remote device X does not support the command.

Remote device X extended-oam link is not established.

Remote device X set unsuccessfully.

Set successfully

[Example]

Shut down the client port:

Raisecom(config-remoteport)# **shutdown**

Open the client port:

Raisecom(config-remoteport)# **no shutdown**

[Related commands]

Commands	Description
show interface port	Show port information on remote device.
show interface port detail	Show details of remote device port.

1.27 snmp trap remote

[Function]

Enable/disable remote trap switch.

[Command format]

snmp trap remote *enable*

snmp trap remote *disable*

[Parameter]

enable: enable remote trap switch;

disable: disable remote trap switch.

[Default]

enable

[Command Modes]

Global configuration mode; privileged user

[Executing Command Instruction]

Enable/disable remote trap switch. When enable trap, system send trap to SNMP network management if receives OAM notification frame; when disable trap, system doesn't send trap to SNMP if receives OAM notification frame.

[Explanation of command execution echo]

Set successfully

[Example]

Raisecom(config)#**snmp trap remote enable**

[Related commands]

Commands	Description
[no] snmp-server enable traps	Enable/disable trap transmitting function.

1.28 snmp-server community

[Function]

Configure SNMP community name for remote device.

[Command Format]

snmp-server community *community-name* {*ro* | *rw*}

no snmp-server community *community-name*

[Parameter]

community-name: community name, string, less than 32;

ro: specify the access privilege of the community is ready-only;

rw: specify the access privilege of the community is ready-write.

[Command Modes]

Remote configuration mode; privileged user mode

[Executing Command Instruction]

Configure SNMP community name for remote device in remote configuration mode. the configured community is line 3 in the community table index, the view is internet.

[Explanation of command execution echo]

Remote device X does not support the command.

Remote device X extended-oam link is not established.

Remote device X set unsuccessfully.

Set successfully

Community name can not exceed 20 characters!

[Example]

Raisecom(config-remote)#**write**

[Related commands]

Commands	Description
show remote-device information	Show information of remote device.

1.29 speed (auto | 10 | 100 | 1000)**[Function]**

Use this command to set rat of client port.

[Command format]

speed (10 / 100 / 1000)

[Parameter]

auto: speed auto-negotiation;

10: speed is 10Mbps;

100: speed is 100Mbps;

1000: the speed the 1000Mbps.

[Command Modes]

Remote port configuration mode; privileged user

[Executing Command Instruction]

Different type of client port can configure different speed.

[Explanation of command execution echo]

Remote device X does not support the command.

Remote device X extended-oam link is not established.

Remote device X set unsuccessfully.

Set successfully

[Example]

Set up the client port speed at 10Mbps:

Raisecom(config-remoteport)# **speed 10**

[Related commands]

Commands	Description
duplex {full half}	Configure duplex for remote device.
show interface port	Show port information of remote device.
show interface port detail	Show details of remote device port.

1.30 switch-mode dot1q-vlan**[Function]**

Set Dot1q VLAN mode for remote device.

[Command format]

switch-mode dot1q-vlan native-vlan <1-4094>
switch-mode dot1q-vlan native-vlan <1-4094> line

[Parameter]

native-vlan: native vlan;
<1-4094>: VLAN ID;
line: Line as ingress port.

[Command Modes]

Remote configuration mode, Privileged EXEC

[Executing Command Instruction]

Set Dot1q VLAN mode for remote device.
If the ingress packet is untag, it will be add the tag. Or else, it will be forwarded.

[Explanation of command execution echo]

Remote device X does not support the command.

Remote device X extended-oam link is not established.

Remote device X set unsuccessfully.

Set successfully

[Example]

Set remote working mode is one TAG, native VLAN is 1, ingress port is client port:
Raisecom(config-remote)#**switch-mode dot1q-vlan native-vlan 1**

[Related commands]

Commands	Description
show remote-device information	Show remote device information.
switch-mode double-tagged-vlan	Set Double tagged VLAN forwarding mode for remote device.
switch-mode transparent	Set transparent mode for remote device.

1.31 switch-mode double-tagged-vlan

[Function]

Set Double tagged VLAN forwarding mode for remote device.

[Command format]

```

switch-mode double-tagged-vlan native-vlan <1-4094>
switch-mode double-tagged-vlan native-vlan <1-4094> line
switch-mode double-tagged-vlan tpid HHHH native-vlan <1-4094>
switch-mode double-tagged-vlan tpid HHHH native-vlan <1-4094> line

```

[Parameter]

native-vlan: native vlan;
 <1-4094>: VLAN ID;
line: Line as ingress port;
tpid: outer tag TPID;
HHHH: outer tag id hexadecimal numeral, range from 0000 to FFFF.

[Command Modes]

Remote configuration mode, Privileged EXEC

[Executing Command Instruction]

Use this command to set Double tagged VLAN forwarding mode for remote device. After set device double TAG mode, no matter the packet enter from ingress port has TAG or not, it will be tagged with specified TPID and out side TAG of native VLAN ID.

[Explanation of command execution echo]

Remote device X does not support the command.

Remote device X extended-oam link is not established.

Remote device X set unsuccessfully.

Set successfully

[Example]

Set remote working mode is double TAG, TPID is 0x9100, native VLAN is 1, ingress port is client port:

```
Raisecom(config-remote)#switch-mode double-tagged-vlan native-vlan 1
```

Set remote working mode is double TAG, TPID is 0x8100, native VLAN is 3, ingress port is line port:

```
Raisecom(config-remote)#switch-mode double-tagged-vlan tpid 8100 native-vlan 3 line
```

[Related commands]

Commands	Description
show remote-device information	Show remote device information.
switch-mode dot1q-vlan	Set Dot1q VLAN mode for remote device.
switch-mode transparent	Set transparent mode for remote device.

1.32 switch-mode transparent

[Function]

Set transparent mode.

[Command format]

switch-mode transparent

[Command Modes]

Remote configuration mode, Privileged user

[Executing Command Instruction]

Use this command to set transparent mode.

[Explanation of command execution echo]

Remote device X does not support the command.

Remote device X extended-oam link is not established.

Remote device X set unsuccessfully.

Set successfully

[Example]

Raisecom(config-remote)#**switch-mode transparent**

[Related commands]

Commands	Description
show remote-device information	Show remote device information
switch-mode double-tagged-vlan	Set Double tagged VLAN mode for remote device
switch-mode dot1q-vlan	Set Dot1q VLAN mode for remote device

1.33 system mtu

[Function]

Set maximal frame length for local and remote device.

[Command format]

system mtu <1500-8000>

[Parameter]

<1500-8000>: the size of frames.

[Command Modes]

Remote configuration mode, Privileged EXEC

[Executing Command Instruction]

The maximum MTU may be different according to different remote device.

The maximum allowable system MTU for RC552-GE is 1916bytes or 1536bytes. For RC552-GE as the remote device, if you set the mtu to 1916, value can be 1536 or 1916.

[Explanation of command execution echo]

Remote device X does not support the command.

Remote device X extended-oam link is not established.

Remote device X set unsuccessfully.

Set successfully

[Example]

Raisecom(config-remote)#**system mtu 1916**

[Related commands]

Commands	Description
show remote-device information	Show remote device information
show system mtu	Show MTU of local device.

1.34 test cable-diagnostics

[Function]

Dummy cable diagnostics. This command is available to ISCOM2000/2100/2800/2900/3000 series and RC5XX series.

[Command format]

test cable-diagnostics

[Command Modes]

Remote configuration mode, Privileged user

[Executing Command Instruction]

Execute dummy cable diagnostics for remote device.

[Explanation of command execution echo]

Remote device X does not support the command.

Remote device X extended-oam link is not established.

Remote device X set unsuccessfully.

Local port: 1

Test will affect link state and traffic.

Test will take a few seconds to run.

Use 'show cable-diagnostics' to read the test results.

Remote device xx is running cable-diagnostics.

[Example]

Raisecom(config-remote)#**test cable-diagnostics**

[Related commands]

Commands	Description
show cable-diagnostics	Show cable diagnostics for remote device.

1.35 upload {remote-bootstrap | remote-system-boot | remote-startup-config | remote-fpga}

[Function]

Upload file from device to server. This command is available to ISCOM2000/2100/2800/2900/3000 series and RC5XX series.

[Command format]

upload {remote-bootstrap | remote-system-boot | remote-startup-config | remote-fpga} **ftp** A.B.C.D USERNAME PASSWORD FILENAME LOCAL-FILENAME

upload {remote-bootstrap | remote-system-boot | remote-startup-config | remote-fpga} **tftp** A.B.C.D FILENAME LOCAL-FILENAME

[Parameter]

- remote-bootstrap*: boot file for remote device;
- remote-system-boot*: start file for remote device;
- remote-startup-config*: configuration file for remote device;
- remote-fpga*: FPGA file for remote device;
- tftp*: tftp protocol for download;
- ftp*: ftp protocol for download;
- A.B.C.D*: IP address for server;
- USERNAME*: username for ftp server;
- PASSWORD*: password for ftp server;
- FILENAME*: file name for server;
- LOCAL-FILENAME*: file name on center device.

[Command Modes]

Privileged EXEC, Privileged user

[Executing Command Instruction]

This command can upload the file from center device to server. these file can be system-boot, startup-config, fpga and bootstrap.

File name: specified file+ suffix.

File type	suffix
system-boot	.Z
startup-config	.conf
bootstrap	.boot
fpga	.vme

User can not upload default file.

[Explanation of command execution echo]

Waiting...Start

Getting source file...Done

Writing to destination...Done

Success!

Failed! (Invalid IP Address)

Failed!(User name error)

Failed!(Password error)

Failed!(File name error)

Waiting...Start

Connecting to server failed

Failed !

Waiting...Start

Getting source file...

Failed!(Open file error)

Waiting...Start

Getting source file ...Done

Writing file to destination ...

Failed ! (Opening file failed)

Waiting...Start
 Getting source file ...Done
 Writing file to destination ...
 Failed! (File writing failed)

Waiting...Start
 Getting source file ...Done
 Writing file to destination ...
 Failed!(Time Out error)

Waiting...Start
 Getting source file ...Done
 Writing file to destination ...
 Failed!(Unknown error)

[Example]

Use TFTP protocol to upload system1/Z in center FLASH to server:

```
Raisecom#upload remote-system-boot tftp 10.168.0.11 sys1.z system1
```

Use TFTP protocol to upload FILE_5.conf in center FLASH to server:

```
Raisecom#upload remote-startup-config ftp 10.168.0.11 user user start.conf FILE_5
```

[Related commands]

Commands	Description
erase	Delete specified file in flash.
dir	Show file in flash.
download	File download.

1.36 upload {startup-config | system-boot}

[Function]

Upload system file, configuration file to remote device. This command is available to ISCOM2000/2100/2800/2900/3000 series and RC5XX series.

[Command format]

```
upload {startup-config | system-boot} ftp A.B.C.D USERNAME PASSWORD FILENAME
```

```
upload {startup-config | system-boot} tftp A.B.C.D FILENAME
```

```
upload system-boot FILENAME
```

```
upload startup-config
```

[Parameter]

system-boot: system boot file;
startup-config: system configuration file;
tftp: tftp protocol for download;
ftp: ftp protocol for download;
A.B.C.D: IP address for server;
USERNAME: username for ftp server;
PASSWORD: password for ftp server;
FILENAME: file on server or center device.

[Command Modes]

Remote configuration mode, Privileged user

[Executing Command Instruction]

Upload system file, configuration file and FPGA file from server. Only **upload startup-config** command can upload multiple files simultaneously.

upload {startup-config | system-boot } ftp A.B.C.D USERNAME PASSWORD FILENAME LOCAL-FILENAME command upload file to center device via extended OAM and then upload to server by FTP.

upload {startup-config | system-boot} tftp A.B.C.D FILENAME LOCAL-FILENAME upload to center device via extended OAM from remote device and then upload to server by TFTP from center device.

upload system-boot FILENAME command upload file from remote device. File name can not be the default name.

upload startup-config command upload file from remote to center device via OAM, then save file name as default. Default name: remote device type+ center OAM link ID+ suffix.

If remote device supports file transport: FILE_ID, for example FILE_5.conf

Or else, the file name is FRAME_ID, for example FRAME_2.conf

This command uploads multiple files. There isn't any effect if some device can not upload file.

[Explanation of command execution echo]

Waiting...Start

Getting source file...Done

Writing to destination...Done

Success!

Failed!(Invalid IP Address)

Failed!(User name error)

Failed!(Password error)

Failed!(File name error)

Waiting...Start

Connecting to server failed

Failed !

Waiting...Start

Getting source file...

Failed!(mem alloc error)

Waiting...Start

Getting source file...

Failed!(File to operate too large error)

Waiting...Start

Getting source file ...Done

Failed ! (OAM link X busy)

Waiting...Start

Getting source file ...Done

Failed ! (OAM link X Time out)

Waiting...Start

Getting source file ...Done

Failed ! (Remote X not support this command)

Waiting...Start

Getting source file ...Done

Failed ! (Extend OAM link X not established)

Waiting...Start

Getting source file...

Failed!(Unknown error)

Waiting...Start

Getting source file ...Done
 Writing file to destination ...
 Failed ! (Opening file failed)

Waiting...Start
 Getting source file ...Done
 Writing file to destination ...
 Failed ! (File writing failed)

Can't upload multiple remote device files to server at one time.
 Falied !

[Example]

Use TFTP protocol to upload system boot file to server:

Raisecom(config-remote)#**upload** system-boot tftp 10.168.0.11 sys1.z

Use FTP protocol to upload startup configuration file to server:

Raisecom(config-remote)#**upload** startup-config ftp 10.168.0.11 user **user** start1.conf

Upload system boot file to server:

Raisecom(config-remote)#**upload system-boot** system5.boot

Upload startup configuration file to server, use default file name:

Raisecom(config-remote)#**upload** startup-config

[Related commands]

Commands	Description
erase	Delete specified file in flash.
dir	Show file in flash.
download	Download file.

1.37 write

[Function]

The command is used to save configuration information of current system. This command is available to ISCOM2000/2100/2800/2900/3000 series and RC5XX series.

[Command format]

write

[Command Modes]

Remote configuration mode, privileged user

[Executing Command Instruction]

Use the command to save configuration information of current system, then the saved system command will be executed automatically after reset the system, a new configuration of the switch is not needed.

[Explanation of command execution echo]

Remote device X does not support the command.

Remote device X extended-oam link is not established.

Remote device X set unsuccessfully.

Saving remote current configuration...

Save remote current configuration successfully

Saving remote current configuration...

Remote device save current configuration unsuccessfully

[Example]

Raisecom(config-remote)#**write**

[Related commands]

Commands	Description
erase	Delete referenced files in system



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